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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/051,860	01/16/2002	Eric Bergman	263/169 P01-0007	1640
34055	7590	05/05/2004	EXAMINER	
PERKINS COIE LLP POST OFFICE BOX 1208 SEATTLE, WA 98111-1208			STINSON, FRANKIE L	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding...

<b>Office Action Summary</b>	Application No. 10/051,860	Applicant(s) BERGMAN, ERIC	
	Examiner FRANKIE L. STINSON	Art Unit 1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 29-32 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5, 29 and 30 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-18 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-15, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/3/03</u> | 6) <input type="checkbox"/> Other: _____  |

1. Claims 4, 519 and 30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in papers filed March 8, 2004.
2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan 4-125927 (Japan'927) in view of either Miki et al., Kanno et al., or Japan 7-155714 (Japan'714).

Re claim 1, Japan'927 is cited disclosing an apparatus for processing a workpiece comprising: a liquid supply source (8); one or more liquid outlets (10) disposed to apply liquid onto the workpiece; a liquid flow line (unnumbered) extending between the liquid supply source and the one or more liquid outlets for carrying liquid to the liquid outlets, at least one heater (3) for heating the liquid before it is applied onto the workpiece, an ozone gas supply system (6) which provides ozone gas around the workpiece (note that Japan'927 discloses an "ozone atmosphere") that differs from the claim only in the recitation of the sonic energy source for introducing sonic energy to the workpiece. Miki, Kanno and Japan'714 are each cited disclosing an arrangement for processing a workpiece, where there is provided a sonic energy source (602, 605 in Miki, 69 in Kanno; 3 in Japan'714) for introducing sonic energy to the workpiece. It therefore would have been obvious to one having ordinary skill in the art to modify the device of

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Japan'927, to include a sonic energy source for introducing sonic energy to the workpiece as taught by either Miki, Kanno or Japan'714, since Miki for example, suggests that by "applying high frequency sound waves" it is possible to "increase the washing effects" and to "shorten washing time" (see Miki col. 6, line 64-67) and Kanno for example, suggests that the use of ultrasonic waves results in the surface of the workpiece being "uniformly cleaned" (see Kanno col. 8, lines 43-48) as is well known in the art. Re claim 2, Kanno and Japan'714 disclose the sonic energy conductor in contact with the workpiece. Re claim 3, Miki is cited disclosing the arrangement of employing quartz, silicon, metal or a polymer (see col. 4, line 12 -28). Re claim 7, Japan'927 discloses the liquid supply source as claimed. Re claim 8, Japan'927 and Miki disclose the ozone supply as claimed. Re claim 8, Japan'927 discloses the recirculation. Re claim 11, Japan'927 discloses the nozzles (10). Re claim 12, Miki discloses (see col. 7, lines 5-8 and col. 8, lines 15-22) that it is necessary to form a film on the surface of the workpiece, where the thickness of the film must be set to "optimal". It is therefore understood by the examiner that means for controlling the thickness is inherently provided. Therefore to modify the device of Japan'927 to have a controlled film, as taught by Miki, for the purpose of enhancing the cleaning process would have been obvious to one having ordinary skill in the art. Re claim 13, Japan'927 and Miki disclose flow control means as claimed. Re claim 14, Japan'927 discloses the spray nozzles. Re claim 15, to have thickness controlling means being that of a rotor, is deemed to be an obvious matter of design. To employ one means for controlling film

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thickness versus another is deemed to be an obvious substitution of equivalents (see MPEP 2144.06).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied prior art as applied to claim 1 above, and further in view of Schoeppel.

Claim 6 defines over the applied prior art only in the recitation of the liquid supply source including a heater for heating the liquid in reservoir. Japan'927 disclose the heating of the liquid at the chamber, therefore, Schoeppel is cited disclosing in an apparatus for treating a workpiece, a liquid supply source having a reservoir (10) with a heater (13) located therein for heating the liquid in the reservoir. It therefore would have been obvious to one having ordinary skill in the art to modify the apparatus Japan'927, to have a heater in the reservoir as taught by Schoeppel, since this is deemed to be an obvious substitution of equivalents (see MPEP 2144.06).

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied prior art as applied to claim 1 above, and further in view of European Patent Office 890,658 (EPO'658).

Claim 10 defines over the applied prior art only in the recitation of the rotor assembly for rotating the workpiece. EPO'658 is cited disclosing in an apparatus for treating a workpiece, where there is provided a rotor assembly (80) for rotating the workpiece. It therefore would have been obvious to one having ordinary skill in the art to modify the device of Japan'927, to include a rotor as taught by EPO'658, for the purpose of ensuring for the complete exposure of the workpiece's surface to the treatment fluid as is common in the art.

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over either European Patent Office 548,596 (EPO'596) or European Patent Office 782,177 (EPO'177) in view of either Japan 5-136045 (Japan'045) or Japan 9-139345 (Japan'345).

Re claim 31, EPO'596 and EPO'177 are each cited disclosing an apparatus for cleaning a workpiece, comprising: a process chamber (1 in EPO'596; 10 in EPO'177), a workpiece holder (5 in EPO'596; 14 in EPO'177) within the process chamber an ozone supply system (6, 7 in EPO'596; 12 in EPO'177) for delivering ozone into the process chamber and a liquid supply source (8, 9 in EPO'596; 11 in EPO'177) for delivering a liquid onto the workpiece that differs from the claim only in the recitation of the sonic energy source on the workpiece holder for introducing sonic energy to a workpiece held on the workpiece holder. Japan'045 and Japan'345 are both cited disclosing in an apparatus for treating workpieces, the arrangement of treating the surface of a workpiece where there is provided a sonic energy source (7 in Japan'045 and 18 in Japan'345) on the workpiece holder for introducing sonic energy to a workpiece held on the workpiece holder. It therefore would have been obvious to one having ordinary skill in the art to modify the device of either EPO'596 or EPO'177, to include a sonic energy source as taught by either Japan'045 or Japan'345, for the purpose of enhancing the treating process and for ensuring uniformity in treatment throughout the surface of the workpiece as is common in the art.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claim 32 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Miki et al.

Re claim 32 (see fig. 6a, 6b), Miki is cited disclosing an apparatus for treating the surface of a workpiece comprising: a process chamber, a workpiece holder (606) within the process chamber for holding a workpiece, a liquid supply source (610) for delivering a liquid to a surface of the workpiece to form a liquid layer on the workpiece surface means (see col. 7, lines 5-8 and col. 8, lines 15-22) for controlling a thickness of the liquid layer formed on the workpiece surface; an ozone supply system (see fig. 9) for delivering ozone into the process chamber (via a liquid carrier), and a sonic energy source (605) in mechanical or fluid contact with the liquid layer on the workpiece surface for delivering sonic energy through the liquid layer to the workpiece surface.

9. Claims 16-18 are allowed.

10. Applicant's arguments with respect to claims 1-3, 6-18, 31 and 32 have been considered but are moot in view of the new ground(s) of rejection.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In Taniyama, Kobayashi et al., Degendt et al. Tomita et al., Japan'427, Japan'930, Japan'566, Japan'188 and Arii, note the workpiece treating means.

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12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FRANKIE L. STINSON whose telephone number is (571) 272-1308. The examiner can normally be reached M-F from 5:30 a.m. to 2:00 p.m. and some Saturdays from 5:30 a.m. to 11:30 a.m.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to TECHNOLOGY CENTER 1700 (571) 272-1700.

Any inquiry for missing parts of this Office Action (copies of references, pages, forms etc.), contact the TEAM LEADER Ms. Nicol Scott (571) 272-1045.

fls



FRANKIE L. STINSON  
Primary Examiner  
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